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A. D. DAVIS

2,202,812

CLEARER ROLL
Filed March 3, 1938

Fig. 1.

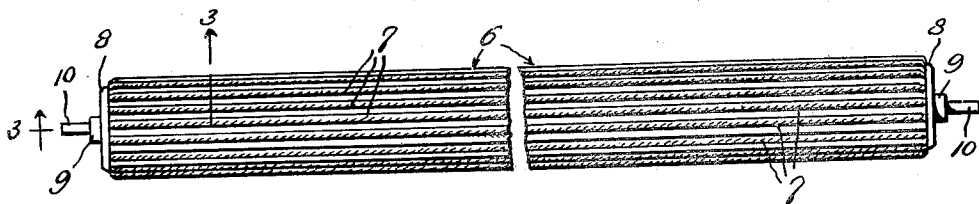


Fig. 2.

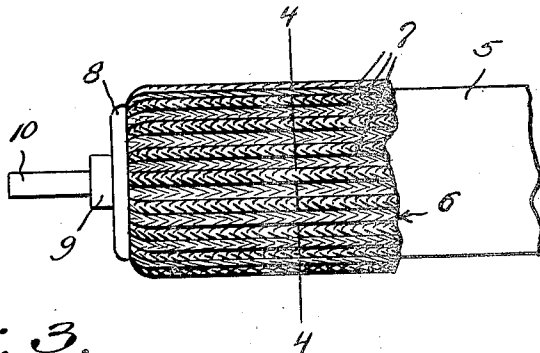


Fig. 3.

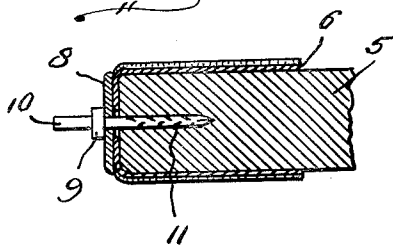


Fig. 4.

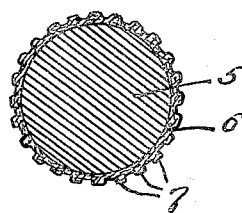
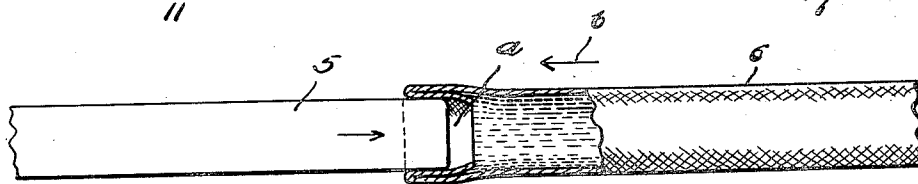


Fig. 5.

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UNITED STATES PATENT OFFICE

2,202,812

CLEARER ROLL

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Application March 3, 1938, Serial No. 193,792

1 Claim. (Cl. 19—140)

This invention relates to that class of devices known as clear or scavenger rolls, and which are employed in spinning and roving machines for preventing broken-down ends and waste from winding onto and interfering with the proper working of the drawing-rolls. These rolls are mounted to rotate in cooperative relation with a fluted steel roll which cooperates with a friction roll pressed thereagainst to draw the yarn strands therethrough for stretching and evening the same. The clearer roll catches the broken threads and waste material from the fluted steel roll, thus keeping the latter roll in a clear and effective condition.

Old style cloth covered clear rolls and such other rolls as heretofore constructed, have generally failed to satisfactorily and fully meet the requirements of service, and it is the primary purpose of the present invention to provide a clearer roll which will be more efficient than and effectively take the place of these old style rolls.

A more specific object of the present invention is to provide an approved and efficient covering for clearer rolls which will most effectively catch the broken threads and waste material from the fluted steel roll, which may be readily applied or removed from the roll proper, and which will present a continuous or unbroken working surface. In carrying out this object, I provide a covering for clearer rolls consisting of a seamless elastic tube of textile material knitted, woven or braided so as to fit closely over and hug the roll proper, and so as to present a circular series of uniformly spaced longitudinal ribs which insure a most efficient clearing action in connection with the fluted type of steel roll to be kept clear.

A further object is to provide a clearer roll which has a longitudinally ribbed seamless textile covering for the proper treatment of the yarn, lint or waste, said covering being readily removable from the roll proper when it is desired to renew the same after becoming worn.

Still another object is to provide hard fiber end members at the end of the roll for effectively securing the ends of the covering against the ends of the roll proper, said hard fiber end members being secured in clamping relation with the ends of the roll proper by means of the trunnion members attached to the ends of the roll.

The exact nature of the present invention will be more clearly apparent from the following description when considered in connection with the accompanying drawing, in which:

Figure 1 is an elevational view, partly broken

away, of a clearer roll constructed and having a covering in accordance with the present invention.

Figure 2 is an enlarged fragmentary view of one end of the roll shown in Figure 1.

Figure 3 is a fragmentary longitudinal section on line 3—3 of Figure 1.

Figure 4 is a transverse section on line 4—4 of Figure 2; and

Figure 5 is a somewhat diagrammatic view, 10 partly in elevation, and partly in section, illustrating the preferred manner of applying the covering to the roll proper in producing the roll of Figure 1.

Referring in detail to the drawing, 5 indicates the roll proper which may be of any suitable type or construction, but which is shown of the ordinary wooden type. The roll proper 5 is provided with a special improved covering 6 constituting part of the present invention and consisting in a seamless elastic tube of textile material knitted, woven or braided so as to closely fit over and hug the roll proper 5, and so that the same is provided with a circular series of uniformly spaced external longitudinal ribs 7. By reason of these ribs, the covering will have an unexpected increased efficiency in catching the broken threads and waste material from the fluted type of steel roll forming part of the means for drawing the yarn strands to stretch and even the same in spinning and roving machines. Being seamless, the covering presents no broken joints and provides a continuous operative surface. Due to the elasticity of the tubular covering, it may be readily applied by simply turning in an end of the tubular covering as indicated at *a* in Figure 5 and then gradually feeding the tube to the left as indicated by the arrow *b*, the tubular covering being initially turned wrong side out with the ribbed surface inside. When the covering has been fully applied, it is right side out and the coating of glue applied to the roll proper 5 does not interfere with the application of the covering but will effectively secure the latter into the roll proper. The tubular covering is preferably made slightly longer than the roll proper so that the ends of the covering will project slightly beyond the ends of the roller as shown. These ends are turned in and firmly clamped against the ends of the roll proper 5 by means of a hard fiber disk 8 secured in place by engagement of the enlargement 9 of the end trunnions 10 therewith. The end trunnions 10 are of the usual form having pointed ends 11 to facilitate driving the same into the exact centers of the ends of the wooden

roller 5. However, it is apparent that suitable trunnions may be provided for the same general purpose but of specifically different construction in connection with metallic rolls. The covering
5 rubs down over the ends of the roll proper, and the covering provides an even and unwrinkled surface from end to end of the roll. When the covering has been unduly worn, the end trunnions 10 and the clamping disks 8 may be removed, whereupon the glue securing the covering to the roll proper may be softened to permit
10 ready removal of the covering by a reverse of the operation above described and illustrated in Figure 5 when the covering was applied. The normally projecting ends of the covering make it
15 convenient to grasp the same for removing the covering in this way, although the covering may be made shorter without the projecting ends if desired.

From the foregoing description, it is believed that the nature and advantages of the present invention will be readily understood and appreciated by those skilled in the art.

What I claim as new is:

A clearer roll for spinning or roving machines comprising a wooden roller, a covering for the roller extending from end to end of the latter and adhesively secured to the same, said covering
5 consisting of a radially stretched seamless elastic tube of textile material formed with longitudinal uniformly spaced external ribs, said covering being longer than the roller to provide ends
10 projecting beyond the ends of the roller, and means clamping the projecting ends of the covering against the ends of the roller.
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